

EXHIBIT H

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

MULTIMODAL MEDIA LLC,

Plaintiff,

v.

GUANGDONG OPPO
MOBILETELECOMMUNICATIONS CORP.,
LTD.,

Defendant.

C.A. No. 2:21-cv-00436-JRG-RSP

DECLARATION OF DR. GEORGE EDWARDS

I, George Edwards, Ph.D., hereby declare and state as follows:

1. My name is George Edwards, Principal Computer Scientist at Quandary Peak Research, Inc. in Los Angeles, CA. I am over eighteen years of age, and I could competently testify as to the matters set forth herein if I am called upon to do so.

2. I am a technical expert in the subject matter areas relevant to the patents-in-suit including the area of wireless communication systems and methods. I am qualified to reach the opinions and conclusions stated in this Declaration.

3. My opinions expressed herein are based on my review of the patents-in-suit, their prosecution histories, extrinsic evidence relating to the technology of the patents-in-suit, and other evidence cited in this declaration. My opinions are also based on my technical experience, knowledge, and expertise in the area of wireless communications systems and methods.

4. I am being compensated for my work on this case at my standard hourly rate of \$500.00 per hour. No part of my compensation is dependent upon the outcome of this case or any issue in it.

1. EDUCATION AND EXPERIENCE

5. I am an expert in the field of wireless networks and communication. This section summarizes my education, professional achievements, and peer-reviewed scientific publications in the field of computer science. A more detailed list of my qualifications is set forth in my curriculum vitae, a copy of which is attached hereto as Exhibit A.

1.1. Education

6. I graduated *summa cum laude* with a Bachelor of Science degree in computer science from Vanderbilt University in 2003. As an undergraduate, I was awarded the Vanderbilt School of Engineering Merit Scholarship. I spent one year in the MS program in computer science at

Vanderbilt. During this time, I conducted research on software modeling and visualization, and I published my findings in several peer-reviewed conference papers and journal articles.

7. I attended graduate school at the University of Southern California, where I was a USC Viterbi School of Engineering Dean's Doctoral Fellow and Annenberg Graduate Fellow. I received an MS in computer science in 2006 and a PhD in computer science in 2010 from USC. My PhD research focused on software design and analysis, with an emphasis on mobile and embedded systems. My research was funded by several government agencies, including the Department of Defense and the NSA, and large companies such as Bosch and InfoSys. I presented my work at numerous conferences and in academic journals, industry magazines, and other publications. In 2008, I received the USC Computer Science Department's award for outstanding graduate student research.

1.2. Employment

8. I currently am employed as Principal Computer Scientist at Quandary Peak Research, Inc. in Los Angeles, CA. In this role, I analyze the development, structure, behavior, and quality of software systems. I have analyzed a broad variety of complex, real-world software systems, and I have conducted many investigations of the design and implementation of these systems in the context of intellectual property litigation. I have analyzed many software systems and their code to determine whether every element of one or more patent claims is found in the system. I also have analyzed software to determine whether it incorporates designs, functions, algorithms, data structures, or other internal structures or behaviors that are alleged to be trade secrets. In copyright infringement litigation, I have conducted numerous comparisons of one application to another to determine the nature, degree, and scope of similarity between them.

9. I formerly was employed as a Lecturer of Computer Science at the University of Southern California. In that capacity, I taught Requirements Engineering (CSCI 568), a graduate-level software engineering class. I also taught Data Structures and Algorithms (CSCI 102), an undergraduate-level software design and programming class.

10. I also formerly worked as a research scientist and software engineer at Blue Cell Software LLC, Intelligent Systems Technology, Inc., IBM, and The Boeing Company. During my time with Blue Cell, I built a simulation-based software design and modeling environment. While at IBM, I conducted research on next-generation mobile architectures, such as large-scale mobile device provisioning systems. At Boeing, I helped to design a specialized mobile computing device for a robust and survivable peer-to-peer wireless network.

1.3. Publications

11. I have authored over thirty scholarly journal articles, magazine articles, conference papers, and book chapters on varied topics related to software engineering and distributed systems. I have delivered numerous invited lectures, seminars, and technology demonstrations related to software design and analysis for university courses, research symposia, conferences, workshops, and industry events in the field of computer science. I also have served as a reviewer, committee member, or panelist for over a dozen computer science journals, magazines, and conferences.

1.4. Prior Testimony

12. On July 17, 2013, I testified by deposition in the matter of *Essociate, Inc. v. Neverblue Media, Inc.*, a patent case in the U.S. District Court for the Central District of California.

13. On November 25, 2013, I testified in U.S. District Court for the Eastern District of Virginia as an expert in mobile devices in a patent infringement matter, *Porto Technology Co., Ltd. and Porto Technology, LLC v. Cellco Partnership d/b/a Verizon Wireless and Verizon Services Corp.*

14. On June 9, 2014, I testified by deposition in the matter of *SecurityBase.com v. Jeffrey Essick, et al.*, a breach-of-contract suit brought in the Superior Court of California for the County of Orange.

15. I testified both by deposition (on June 17, 2014) and in U.S. District Court for the District of Kansas (on June 24, 2014) in the matter of *AgJunction, LLC v. Agrian, Inc. et al.*, a copyright and trade secret case.

16. I testified both by deposition (on October 12, 2015) and in U.S. District Court for the Southern District of California (on December 7 and 8, 2015) in the matter of *Anthony Johnson v. Storix, Inc.*, a copyright infringement matter.

17. On August 15, 2016, I testified by deposition in the matter of *Backflip Software, Inc. v. Cisco Systems, Inc. et al.*, a breach-of-contract suit brought in the Superior Court of California for the County of Santa Clara.

18. On July 12, 2017, I testified by deposition in the matter of *Implicit, LLC v. Trend Micro, Inc.*, a patent case in the U.S. District Court for the Eastern District of Texas.

On December 8, 2017, I testified by deposition in the matter of *Farmers Edge Inc., Farmers Edge (US) Inc., and Farmers Edge (US) LLC v. Farmobile, LLC, Jason G. Tatge, Heath Garrett Gerlock, and Randall Thomas Nuss*, a trade secret misappropriation case in the U.S. District Court for the District of Nebraska.

19. On December 14, 2017, I testified by deposition in the matter of *Vesta Corporation v. Amdocs Management Limited, et al.*, a trade secret misappropriation case in the U.S. District Court for the District of Oregon.

20. On December 18, 2017, I testified by deposition in the matter of *eBay, Inc. v. MasterObjects, Inc.*, an *inter partes* review proceeding before the Patent Trial and Appeal Board of the United States Patent and Trademark Office.

21. On May 23, 2018, I testified in U.S. District Court for the District of Nebraska in the matter of *Farmers Edge Inc., Farmers Edge (US) Inc., and Farmers Edge (US) LLC v. Farmobile, LLC, Jason G. Tatge, Heath Garrett Gerlock, and Randall Thomas Nuss*.

22. On June 28, 2018, and May 25, 2021, I testified by deposition in the matter of *Bryndon Fisher v. The United States of America*, a class action lawsuit in the U.S. Court of Federal Claims.

23. On December 5-6, 2019, I testified by deposition in the matter of *American National Manufacturing, Inc. v. Sleep Number Corporation*, an *inter partes* review proceeding before the Patent Trial and Appeal Board of the United States Patent and Trademark Office.

24. On August 9, 10, and 11, 2022, I testified in the matter of *Farmobile, LLC v. Farmers Edge, Inc.*, a patent case in the Federal Court of Canada.

2. LEGAL STANDARDS

25. I am not a legal expert and offer no opinions on the law. However, I have been informed by counsel of the legal standards that apply with respect to claim construction, and I have applied them in arriving at my conclusions.

26. I understand that claim terms in a patent should be interpreted from the vantage point of a person of ordinary skill in the art (“POSITA”) at the time of the invention.

27. I am familiar with patents and with the legal framework by which claim terms in patents are to be interpreted. I understand that a claim term must be given the meaning it would have had to one of skill in the art at the time of the invention after reviewing the intrinsic record.

28. With respect to construing the patent claims, I understand that the claims of a patent define the invention. Claim terms are generally given their ordinary and customary meaning, which is the meaning that the terms would have to POSITA. A POSITA would arrive at their understanding of claim language based on the entire patent, including the claim language and specification. I understand that one must first consider the intrinsic evidence, which includes the claim language, the specification, and the prosecution history of the asserted patent. I further understand that one may also consider extrinsic evidence to ensure that a claim construction is not inconsistent with clearly expressed and widely held understandings in the pertinent technical field, particularly for technical terms. Such extrinsic evidence may take the form of expert testimony, dictionaries, textbooks, technical treatises, and articles. I further understand that one may not rely on extrinsic evidence to contradict or vary the clear meaning of claims provided by the intrinsic evidence of record.

29. I understand that a claim is indefinite if one skilled in the art would not understand what is claimed even after the claim is read in light of the specification. Specifically, a claim is indefinite if a person of ordinary skill in the art would not understand the scope of the claim with reasonable certainty. I understand that a claim is indefinite if its full scope is not reasonably certain to a POSITA, even if a POSITA would be able to discern particular embodiments that are within the scope of the claim.

30. I further understand that if a claim attempts to cover both an apparatus and a method of use of that apparatus, the claim is indefinite. Similarly, I understand that if a claim does not inform with reasonable certainty, one skilled in the art of when, as a matter of timing, the claim would be infringed, then the claim is indefinite.

31. I understand that a claim limitation is subject to 35 U.S.C. § 112, ¶ 6 if an element in a claim is expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof. In such a case, the claim limitation is construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

32. I further understand that a claim limitation that does not use the phrase “means for” will trigger a rebuttable presumption that Section 112, ¶ 6 does not apply.

33. Furthermore, I understand that a claim limitation is not means-plus-function if persons of ordinary skill in the art reading the specification would understand that a term used in the limitation identifies the structure that performs the function. In other words, it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures, and even if the term identifies the structures by their function. In this regard, the term is not required to denote any specific structure or a precise physical structure in order to avoid means-plus-function treatment.

34. My opinions in this declaration were formed from the perspective of a person of ordinary skill in the art as of the effective filing dates of each of the patents-in-suit alleged by Plaintiff Multimodal Media LLC in its Amended Identification of Asserted Claims and Infringement Contentions.

2.1. LEVEL OF ORDINARY SKILL IN THE ART

35. It is my opinion that the person of ordinary skill in the art would have a bachelor’s degree in computer engineering and/or computer science as well as several years of professional experience with software engineering for mobile devices. Extensive experience and technical

training may substitute for educational requirements, while advanced education might substitute for experience.

36. I myself, based on my education and experience as described above, would meet the qualifications and background of a POSITA.

3. CLAIM TERMS

37. I understand that the parties dispute the meaning of certain claim terms of the following U.S. Patent Nos. 7,929,949 (“949 Patent”); 8,107,978 (“978 Patent”); 9,185,227 (“227 Patent”); and 10,552,030 (“030 Patent”). The disputed claim terms I have been asked to address are:

- a. “client application” (’949 Patent, claim 1 and ’978 Patent, claims 10, 13 and 14)
- b. “wherein the client application transmits one of a text message, a voice message, and a combination thereof” (’978 Patent, claim 13)
- c. “wherein said call completion actions comprise setting a reminder to call back said called party at a configurable time, recording media data on said calling party device, transmitting said media data to a called party device, transmitting a missed call alert to said called party device, transmitting a notification on availability of said called party, transmitting said media data to a social networking platform, transmitting an automated message requesting said called party to call back said calling party when available, and any combination thereof” (’227 Patent, claims 1 and 11)
- d. “one of text data, audio data, video data, audiovisual data, image data, multimedia data, message data, and any combination thereof” (’227 Patent, claims 8 and 17)

- e. “interface definition module” (’030 Patent, claim 8)
- f. “detection module” (’030 Patent, claim 8)
- g. “action management module” (’030 Patent, claim 8)

38. I have been asked to address each of these claim terms from the perspective of a person of ordinary skill in the art at the time of the invention.

4. DISCUSSION

4.1. U.S. Patent No. 7,929,949

4.1.1. “client application” (claim 1)

Multimodal’s Proposed Construction	OPPO’s Proposed Construction
a program present on or accessible by the sender’s mobile device	Plain and ordinary meaning

39. The above limitation is present in claim 1 of the ’949 patent. I have been asked to provide the perspective of a person of ordinary skill in the art regarding the meaning of the above limitation in the context of the ’949 patent.

40. A POSITA would understand that the phrase “client application” refers to an application-layer program on the client device. In a distributed client-server system, the client and server communicate over a network. In such an architecture, the term “client” may be used as shorthand to refer to a client application or a client device. A client device may be a mobile phone, tablet, laptop, computer, or other device running a program, which is the client application. The server device is a remote computer that is in communication with the client device. The server device also runs a program, which is the server application. The server-side and client-side computer programs are commonly referred to as a “server application” or a “client application,” depending on which side of the network they are resident on, because they run within the application layer of

the device. The Microsoft Computer Dictionary, 5th Edition, which was published in 2002, defines “client-side program” as follows:¹

client-side program: n. On the Internet, a program that is run on a client computer rather than on a server computer.

41. The specification of the ’949 patent is consistent with the plain and ordinary meaning. This is illustrated in FIG. 2 of the ’949 patent, which shows a client application communicating across a network with server applications and modules.

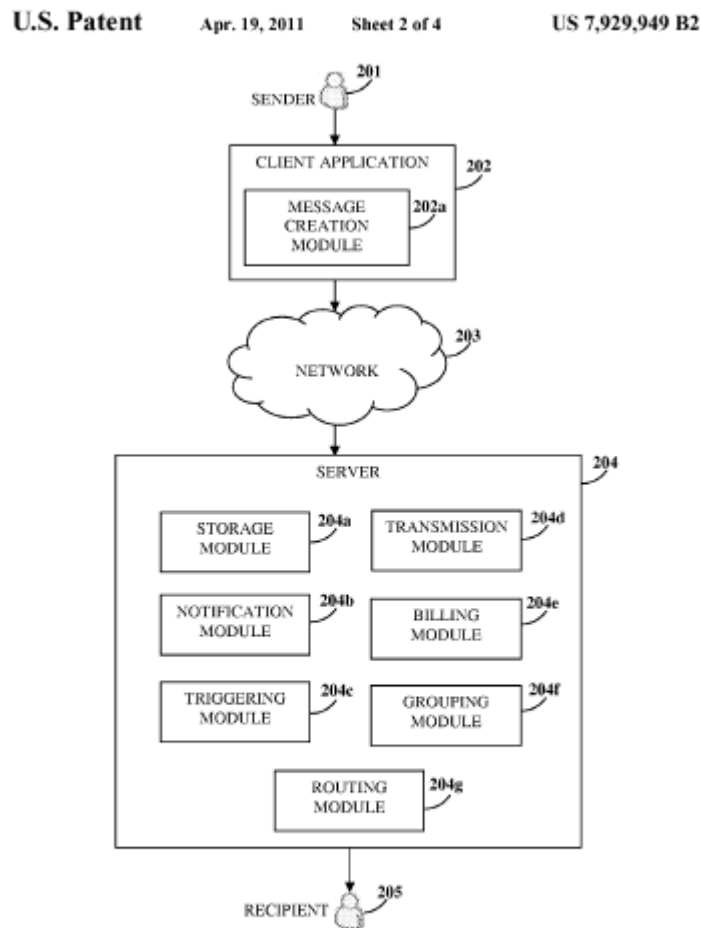


FIG. 2

¹ See **Exhibit B**. Microsoft Press. *Microsoft computer dictionary*. Microsoft Press, 2002. p. 103.

42. In my opinion, Multimodal's proposed construction would not be consistent with the way that a POSITA would understand the phrase "client application" because a POSITA would not consider a program that is merely "accessible by" the sender's mobile device to be a client application. For example, a server device and application could be considered "accessible by" a client device (e.g., a "sender's mobile device") because the client device can communicate with the server over the network. Yet, the server application is not, by definition, part of the client application, as the dichotomy between client and server is the central basis of the client-server architectural style.

43. The specification of the '949 patent supports the client application being on a client device that is remote from, and distinct from, the server. The specification discusses various "methods for making the client application 202 available to the sender 201."² One example discusses a "[v]oice SMS [that] allows users to send and receive voice messages associated with SMS text messages."³ In this context a "user of standard SMS text service is provided with a link within each message that allows addition or retrieval of a voice message associated with an SMS text message."⁴ Further, the specification illustrates other embodiments where the client application is provided to the sender. The specification states, "The client application may be available to the sender, for example, on a mobile device of the sender, over a voice call, or via a web interface."⁵ The specification also states, "The client application 202 may, for example, be made available to the sender 201 on a mobile device of the sender 201."⁶ The specification also states, "The client application 202 may also be made available over a voice call or via a web interface that allows the

² '949 patent, 3:52-53

³ Id. at 3:62-63

⁴ Id. at 3:64-67

⁵ '949 patent, 2:10-12

⁶ '949 patent, 3:54-56

sender 201 to create an interactive multimodal message.”⁷ Note that these statements do not mean that any program “accessible by” the client device is part of the client application. For example, when the client application is made available via a web interface, the client application may be a Java applet or client-side JavaScript application that runs within the web browser on the client device. This is illustrated by the definition of “client-side application” given in the Dictionary of Computer and Internet Terms, 10th Edition, which was published in 2009:⁸

***client-side application:** a computer program that runs on a network client rather than on the server. For instance, Java applets are client-side applications; when you view a web page that contains an applet, the applet is sent to your computer and runs on it.*

44. As a second example, when the client application is made available over a voice call, the user’s device renders audio instructions that the user hears and accepts inputs such as voice or dual-tone multi-frequency (DTMF) input. This represents the user interface functionality of the client application which is resident on the sender’s mobile device.

45. It is my opinion that the proposed definition of “a program present on or accessible by the sender’s mobile device” is not what a POSITA would understand the phrase to mean given the state of the art at the time of the application leading to the ’949 patent, the specification, or file history of the ’949 patent. It is my opinion that nothing contained in these documents would inform a POSITA that the use of the term “client application” is anything other than its ordinary usage.

4.2. U.S. Patent No. 8,107,978

4.2.1. “client application” (claims 10, 13 and 14)

Multimodal’s Proposed Construction	OPPO’s Proposed Construction
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⁷ ’949 patent, 4:4-6

⁸ See **Exhibit C**. Downing, Douglas A., et al. *Dictionary of computer and Internet terms*. Barron’s Educational Series, Inc, 2009. p. 93.

a program present on or accessible by the sender's mobile device	Plain and ordinary meaning
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46. The above limitation is present in claims 10, 13 and 14 of the '978 patent. I have been asked to provide the perspective of a person of ordinary skill in the art regarding the meaning of the above limitation in the context of the '978 patent.

47. As stated above, A POSITA would understand that the phrase "client application" refers to an application layer program on the client device. For the same reasons as stated above, Multimodal's proposed construction would not be consistent with the way that a POSITA would understand the phrase "client application."

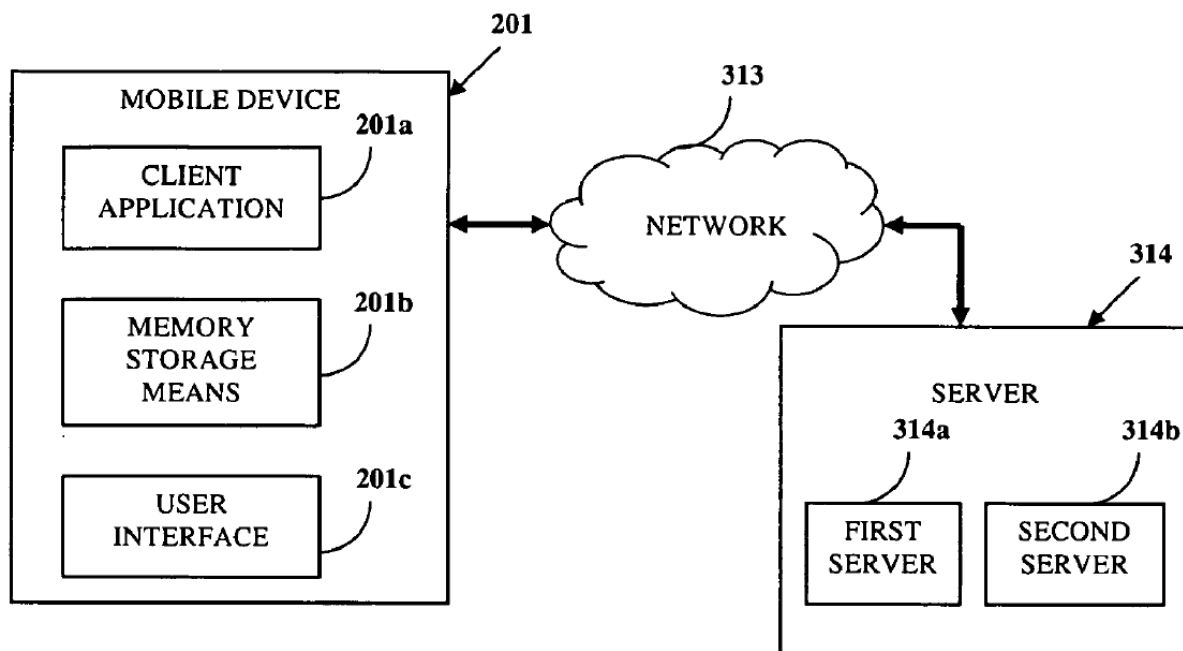


FIGURE 3A

48. The specification of the '978 patent teaches that the client application is resident on the mobile device and can communicate with the server through the network. For example, it teaches "[t]he mobile device 201 comprises a client application 201a, a user interface 201c, and a

memory storage means 210b.”⁹ The specification further states that “[t]he internal operating system may support a high level language interface such as Java. The highlevel language Java client is executed on a Java sandbox 302. The client application 201a in the first layer 312 may be one of, but not restricted to, a binary runtime environment for wireless (BREW) client 306, a Java client 303 or a Symbian client 305 residing in the native application environment 304.”¹⁰ It is my opinion that nothing contained in the specification of the ’949 patent would inform a POSITA that the use of the term “client application” is anything other than its ordinary usage.

4.2.2. “*wherein the client application transmits one of a text message, a voice message, and a combination thereof*” (claim 13)

Multimodal’s Proposed Construction	OPPO’s Proposed Construction
Plain and ordinary meaning	Indefinite

49. The above limitation is present in claim 13 of the ’978 patent. I have been asked to provide the perspective of a person of ordinary skill in the art regarding the meaning of the above limitation in the context of the ’978 patent.

50. A POSITA would have identified the logical contradiction in this limitation and would therefore be unable to determine the scope of the claim and what systems are encompassed by the claim. More specifically, this limitation explicitly requires the transmission of “one of,” which is logically in conflict with “a combination thereof.” A POSITA would not understand whether the client application is indeed limited to transmitting *one of* or could transmit *more than one of* which is a combination within the scope of “a combination thereof.” For example, a POSITA would not be able to know whether a client application that transmits a text message *and* a voice message meets this claim element. On the one hand, a text message and a voice message may be “a

⁹ ’978 patent, 5:25-27

¹⁰ *Id.* at 5:61-6:5

combination thereof” which is “one of a text message, a voice message, and a combination thereof.” On the other hand, such a client application would be transmitting *three* (not *one*) of the listed items: (1) a text message, (2) a voice message, and (3) a combination thereof. A POSITA would therefore be confused and unable to decide whether this claim element is present. The specification and claims support this limitation being indefinite.

51. The specification uses the phrase “one of” to denote a list of items that are mutually exclusive of each other. For example, the ’978 patent states “[t]he operating system may be *one of* Symbian, Windows, Linux, etc.”¹¹ *See also* “[t]he client application 201a in the first layer 312 may be *one of*, but not restricted to, a binary runtime environment for wireless (BREW) client 306, a Java client 303 or a Symbian client 305 residing in the native application environment 304.” *Id.* at 5:66-6:3 A POSITA would have known that mobile devices of the time were configured to run a single operating system such as Symbian OS, Windows OS, or Linux OS and a given client application would be restricted to a single runtime environment such as BREW, Java clients or Symbian clients.

52. A POSITA would have specific training and experience with the formal usage of logical connectors such as AND, OR, and NOT; truth tables and the truth values of propositions; set theory including operations on collections of objects; and other relevant topics from computer science theory and discrete mathematics. In my experience as a student, graduate teaching assistant, and lecturer of both undergraduate and graduate-level courses, such topics are a typical part of the undergraduate computer science curriculum. A POSITA would also employ his or her knowledge in these topics in professional work, as they are commonly employed in programming and software development. Given this training and experience, a POSITA would interpret claim 13 in a

¹¹ *Id.* at 5:53-54 (emphasis added)

disciplined, formal, and logical manner. A POSITA would readily conclude that the language of claim 13 suffers from a logical contradiction because it is not possible to have a set of “one of” any item, and at the same time require that this given set have a “combination” of the previous two. This would lead the POSITA to be unable to know whether certain systems fall within the scope of the claim or not.

53. If the patentee had intended the claim to be capable of transmitting more than one of the types of messages, it could have easily drafted the claim in manner that allowed for that given the teachings of the specification. A mere addition of “at least” in front of “one of” would have informed a POSITA of the scope of the claim which as drafted is unclear and therefore indefinite. Alternatively, the patentee could have simply stated the claim element as “wherein the client application transmits a text message, a voice message, or a combination thereof,” which uses fewer words than the actual claim element by striking the words “one of” and changing “and” to “or.”

4.3. U.S. Patent No. 9,185,227

4.3.1. *“wherein said call completion actions comprise setting a reminder to call back said called party at a configurable time, recording media data on said calling party device, transmitting said media data to a called party device, transmitting a missed call alert to said called party device, transmitting a notification on availability of said called party, transmitting said media data to a social networking platform, transmitting an automated message requesting said called party to call back said calling party when available, and any combination thereof” (claims 1 and 11)*

Multimodal’s Proposed Construction	OPPO’s Proposed Construction
Plain and ordinary meaning	Indefinite

54. The above limitation is present in claims 1 and 11 of the '227 patent. I have been asked to provide the perspective of a person of ordinary skill in the art regarding the meaning of the above limitation in the context of the '227 patent.

55. My analysis with respect to this limitation is similar to my analysis above regarding claim 13 of the '978 patent. This limitation is similarly vague and nonsensical, and, for similar reasons, fails to inform, with reasonable certainty, the scope of the invention. Specifically, this limitation includes nonsensical combinations such as “transmitting said media data to a called party device” but not “recording media data.” An additional exemplary combination within the scope of “any combination” is “transmitting said media data to a Social Networking platform” without “recording media data.” Given the teachings of the specification, one of ordinary skill in the art would not understand the metes and bounds of this limitation.

56. The specification and claims support this limitation being indefinite. The specification of the '227 patent recites this element in the summary of the invention section. It states the following.

“The call completion actions comprise, for example, setting a reminder to call back the called party at a configurable time, recording media data on the calling party device, transmitting the media data to the called party device, transmitting a missed call alert to the called party device, transmitting a notification of the detected incomplete call to the called party device, transmitting a notification on availability of the called party, transmitting the media data to a social networking platform, transmitting an automated message requesting the called party to call back the calling party when available, etc., and any combination thereof.”¹²

57. A POSITA would have identified in this limitation actions and combinations of actions that purport to be “call completion actions” but which logically cannot lead to a possible call

¹² '227 patent, 3:7-18

completion event. A POSITA would therefore be unable to determine the scope of the claim and what systems are encompassed by the claim. As an example, a POSITA would not understand how merely recording media data on the calling device, without ever transmitting it from the calling device, could possibly facilitate a possible future call completion. A POSITA would therefore not be able to understand whether recording media that is never sent to anyone would infringe the claim. Another example is related to the “transmitting the media data to the called party device” call completion action because it is impossible to transmit the media if the media has not first been recorded. It is the combination of the two different actions in a specific order which would lead to a possible call future completion event; the first one being the “recording media data on the calling party device,” and the second one being “transmitting the media data to the called party device.” As another example, the combination of first “transmitting the media data to the called party device” and then “recording media data on the calling party device” also cannot result in a call completion event. A POSITA would be confused by this claim element and would be unable to decide whether this claim element is present in certain systems. Given the teaching of the specification and file history, a POSITA would find it completely unclear, if not impossible to make and use the claimed invention. Further, a POSITA would not understand the metes and bounds of the claims and as such find the claims indefinite.

4.3.2. *“one of text data, audio data, video data, audiovisual data, image data, multimedia data, message data, and any combination thereof” (claims 8 and 17)*

Multimodal’s Proposed Construction	OPPO’s Proposed Construction
Plain and ordinary meaning	Indefinite

58. The above limitation is present in claims 8 and 17 of the '227 patent. I have been asked to provide the perspective of a person of ordinary skill in the art regarding the meaning of the above limitation in the context of the '227 patent.

59. For the reasons discussed above in Section 4.2.2, a POSITA would have identified the logical contradiction in this limitation and would therefore be unable to determine the scope of the claim and what systems are encompassed by the claim. The claim specifically limits it to “one of” the recited data types, which is inconsistent with “any combination thereof” as also recited by the claim. A POSITA would not understand whether the claim is limited to one or, rather, to any combination of the recited data items.

60. The specification and claims support this limitation being indefinite. The phrase “one of” is used primarily in the claims and the “summary of the invention” section where it merely recites the language of the claims. Other than these instances, it is used to denote singular options. For example, the '227 patent teaches “The second network component is either the same as the first network component or one of multiple network components excluding the first network component.”¹³

61. If the patentee had intended the claim to be capable of transmitting more than one of the types of messages, it could have easily drafted the claim in manner that allowed for that given the teachings of the specification. A mere addition of “at least” in front of “one of” would have informed a POSITA of the scope of the claim which as drafted is unclear and therefore indefinite. Alternatively, the patentee could have simply stated the claim element as “text data, audio data, video data, audiovisual data, image data, multimedia data, message data, or any combination

¹³ '227 patent, 6:40-43

thereof,” which uses fewer words than the actual claim element by striking the words “one of” and changing “and” to “or.”

4.4. U.S. Patent No. 10,552,030

4.4.1. “interface definition module” (claim 8)

Multimodal’s Proposed Construction	OPPO’s Proposed Construction
Not subject to 112 p.6 Plain and ordinary meaning	Function: defining a plurality of interface regions on said graphical user interface of said electronic device Structure: A software component of the gesture based media recording application configured to define multiple interface regions on the graphical user interface and associate a predefined function with each of the defined user interface regions. The interface definition module further configured to dynamically change the functionality of the interface regions to a different predefined function. [FIG. 8, 15: 21 – 36]

62. The above limitation is present in claim 8 of the ’030 patent. I have been asked to provide the perspective of a person of ordinary skill in the art regarding the meaning of the above limitation in the context of the ’030 patent.

63. In my opinion a POSITA would understand that the word “module” in this context would refer to a software component resident in the client application that manages the user interface. Specifically, the claimed “interface definition module” would be responsible for defining various regions on a graphical user interface and associating these regions to various actions if certain gestures were detected. The specification clearly states, and claim 8 requires, various detected gestures on different regions of the user interface are associated to various different functions. The ’030 patent neither describes nor enables any other component capable of performing the functions

of defining user interface regions, associating them with actions, and reconfiguring those regions if certain gestures are detected. The 030 patent states the following.

“The interface definition module **801 a** defines multiple interface regions **301** on the GUI **302** of the electronic device **303** as exemplarily illustrated in FIGS. 3A-3D, FIGS. 4A-4D, and FIGS. 6A-6E. The interface definition module **801 a** further associates a predefined function from multiple predefined functions with each of the defined interface regions **301** on the GUI **302** as disclosed in the detailed description of FIGS. 3A-3D and FIGS. 4A-4D. The interface definition module **801 a** also dynamically changes the predefined function associated with one of the defined interface regions **301** to another one of the predefined functions based on one or more communication modes and user preferences. In an embodiment, the interface definition module **801 a** configures predefined functions for one or more defined interface regions **301** based on the user's preferences as disclosed in the detailed description of FIG. 5.”¹⁴

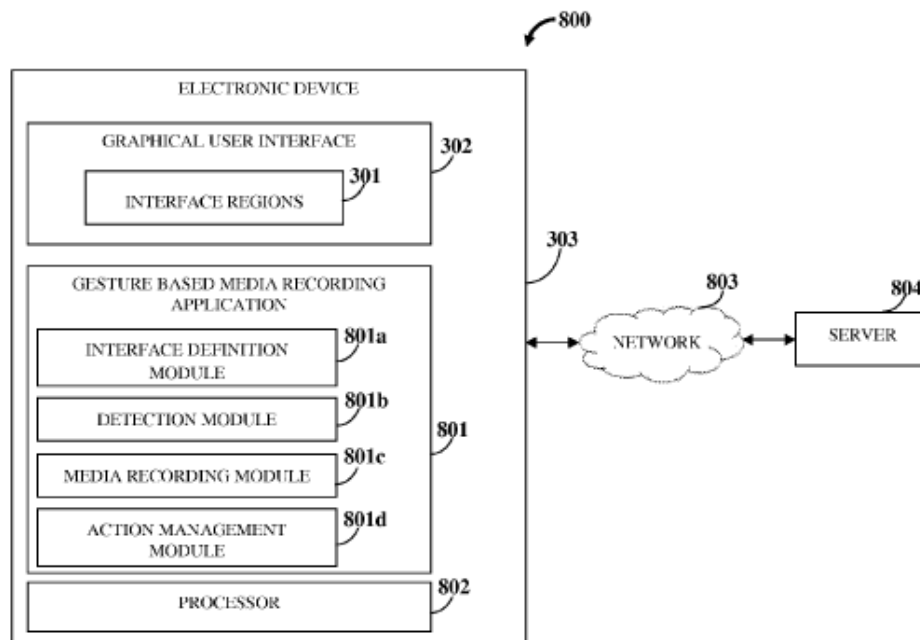


FIG. 8

¹⁴ ‘030 patent, 15: 21-36

4.4.2. “detection module” (claim 8)

Multimodal’s Proposed Construction	OPPO’s Proposed Construction
Not subject to 112 p.6 Plain and ordinary meaning	Function: detecting a first gesture from among multiple gestures on a first of said defined interface regions, wherein said first gesture is a press and hold gesture Structure: A software component of the gesture based media recording application configured to detect one or more physical touch or other gesture on a defined region of a graphical user interface. [FIG 8, 15: 38 – 48]

64. The above limitation is present in claim 8 of the ’030 patent. I have been asked to provide the perspective of a person of ordinary skill in the art regarding the meaning of the above limitation in the context of the ’030 patent.

65. As stated above, in my opinion a POSITA would understand that the word “module” in this context would refer to a software component resident in the client application that detects gestures on the user interface. Specifically, the claimed module would be responsible for the detection of gestures that are associated with various commands or actions taken by the device. The ’030 patent neither describes nor enables any other component capable of performing the functions of detecting gestures on user interface regions. The 030 patent states the following.

“The detection module **801 b** detects one of multiple gestures, for example, a click and hold gesture, a press and hold gesture, a tap gesture, a tap and hold gesture, a touch gesture, a slide gesture, etc., on one of the defined interface regions **301**. The action management module **801 d** performs a first action associated with the recording of the media data in one of the communication modes, on detection of a gesture on one of the defined interface regions **301**. The detection module **801 b** further detects another gesture on the same one of the defined interface regions **301** or another one of the defined interface regions **301**.

The action management module **801** *d* performs a second action, in response to the detection of another gesture on the same one of the defined interface regions **301** or another one of the defined interface regions **301**. The first action and the second action are at least one of: triggering recording of the media data, switching from one communication mode to another communication mode for recording the media data; canceling the recording of the media data, generating and displaying multiple options for performing an operation associated with the recorded media data, etc.”¹⁵

4.4.3. “*action management module*” (claim 8)

Multimodal’s Proposed Construction	OPPO’s Proposed Construction
Not subject to 112 p.6 Plain and ordinary meaning	Function: starting said recording of media data in a push to talk (PTT) recording mode, on said detection of said first gesture on said first of said defined interface regions Structure: A software component of the gesture based media recording application configured to perform a predefined action based on the detection of a gesture on a defined region of a graphical user interface. [FIG. 8, 15: 42 – 55]

66. The above limitation is present in claim 8 of the ’030 patent. I have been asked to provide the perspective of a person of ordinary skill in the art regarding the meaning of the above limitation in the context of the ’030 patent.

67. As stated above, in my opinion a POSITA would understand that the word “module” in this context would refer to a software component resident in the client application that manages actions based on the detection of a gesture on a defined region of a graphical user interface. Specifically, the claimed module would be responsible for the managing action associated to the gestures detected on various regions of the user interface. The ’030 patent neither describes nor

¹⁵ *Id* at 13:38-57

enables any other component capable of performing the functions of managing actions associated with gestures detected on user interface regions. The 030 patent states the following.

“The media recording application **801** comprises an interface definition module **801 a**, a detection module **801 b**, a media recording module **801 c**, and an action management module **801 d**. The interface definition module **801 a** defines multiple interface regions **301** on the GUI **302** of the electronic device **303** as exemplarily illustrated in FIGS. 3A-3D, FIGS. 4A-4D, and FIGS. 6A-6E. The interface definition module **801 a** further associates a predefined function from multiple predefined functions with each of the defined interface regions **301** on the GUI **302** as disclosed in the detailed description of FIGS. 3A-3D and FIGS. 4A-4D. The interface definition module **801 a** also dynamically changes the predefined function associated with one of the defined interface regions **301** to another one of the predefined functions based on one or more communication modes and user preferences. In an embodiment, the interface definition module **801 a** configures predefined functions for one or more defined interface regions **301** based on the user's preferences as disclosed in the detailed description of FIG. 5.”¹⁶

5. CONCLUSION

68. I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my information and belief.

Executed on January 20, 2023, at Los Angeles, California,



George Edwards

¹⁶ *Id.* at 15:42-55

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing document was served by email on Plaintiff's counsel of record on January 20, 2023.

/s/ Nicole S. Cunningham